

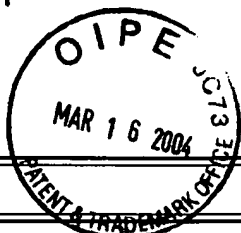


Electronic Filing System (EFS) Data
Electronic Patent Application Submission
USPTO Use Only

EFS ID: 57194
Application ID: 10686486
Title of Invention: APPARATUS FOR ELECTRO
CHEMICAL DEPOSITION OF
COPPER METALLIZATION WITH
THE CAPABILITY OF IN-SITU
THERMAL ANNEALING
First Named Inventor: ROBIN CHEUNG
Domestic/Foreign Application: Domestic Application
Filing Date: 2003-10-15
Effective Receipt Date: 2004-03-16
Submission Type: Information Disclosure
Statement
Filing Type:
Confirmation number: 8014
Attorney Docket Number: AMAT3421C2
Total Fees Authorized: 180.0
Payment Category: Deposit Account
Deposit Account Number: 200782
Deposit Account Name: N. ALEXANDER NOLTE
Access Code: ****
RAM Payment Status: RAM success
RAM User ID: EFSPROD
RAM Accounting Date: 2004-03-16
RAM Sequence Number: 15




Digital Certificate Holder: cn=N. Alexander Nolte,ou=Registered Attorneys,ou=Patent and
Trademark Office,ou=Department of Commerce,o=U.S. Government,c=US
Certificate Message Digest: 7667294b32627bf3f3c3de612810de5f6e7f4163



TRANSMITTAL

Electronic Version v1.1

Stylesheet Version v1.1.0

| Title of Invention | APPARATUS FOR ELECTRO CHEMICAL DEPOSITION OF COPPER METALLIZATION WITH THE CAPABILITY OF IN-SITU THERMAL ANNEALING | | | | | | | | | | | | | | | |
|--|--|----------------|---------------------------|-------------|----------------|--|----------------------|------------------|--|------------------|--------|--------------------------|--|------------|--|------------|
| Application Number: 10/686486  | | | | | | | | | | | | | | | | |
| Date: 2003-10-15 | | | | | | | | | | | | | | | | |
| First Named Applicant: ROBIN CHEUNG | | | | | | | | | | | | | | | | |
| Confirmation Number: 8014 | | | | | | | | | | | | | | | | |
| Attorney Docket Number: AMAT3421C2 | | | | | | | | | | | | | | | | |
| <p>I hereby certify that the use of this system is for OFFICIAL correspondence between patent applicants or their representatives and the USPTO. Fraudulent or other use besides the filing of official correspondence by authorized parties is strictly prohibited, and subject to a fine and/or imprisonment under applicable law.</p> <p>I, the undersigned, certify that I have viewed a display of document(s) being electronically submitted to the United States Patent and Trademark Office, using either the USPTO provided style sheet or software, and that this is the document(s) I intend for initiation or further prosecution of a patent application noted in the submission. This document(s) will become part of the official electronic record at the USPTO.</p> | | | | | | | | | | | | | | | | |
| <table border="1"><thead><tr><th>Submitted by:</th><th>Elec. Sign.</th><th>Sign. Capacity</th></tr></thead><tbody><tr><td>Mr. N. ALEXANDER NOLTE Registered Number: 45689</td><td>[N. ALEXANDER NOLTE]</td><td>Attorney</td></tr></tbody></table> | | | Submitted by: | Elec. Sign. | Sign. Capacity | Mr. N. ALEXANDER NOLTE Registered Number: 45689 | [N. ALEXANDER NOLTE] | Attorney | | | | | | | | |
| Submitted by: | Elec. Sign. | Sign. Capacity | | | | | | | | | | | | | | |
| Mr. N. ALEXANDER NOLTE Registered Number: 45689 | [N. ALEXANDER NOLTE] | Attorney | | | | | | | | | | | | | | |
| <table><tr><td>Documents being submitted</td><td>Files</td></tr><tr><td>us-fee-sheet</td><td>AMAT3421C2NAN-usfees.xml</td></tr><tr><td></td><td>us-fee-sheet.xsl</td></tr><tr><td></td><td>us-fee-sheet.dtd</td></tr><tr><td>us-ids</td><td>AMAT3421C2NAN-usidst.xml</td></tr><tr><td></td><td>us-ids.dtd</td></tr><tr><td></td><td>us-ids.xsl</td></tr></table> | | | Documents being submitted | Files | us-fee-sheet | AMAT3421C2NAN-usfees.xml | | us-fee-sheet.xsl | | us-fee-sheet.dtd | us-ids | AMAT3421C2NAN-usidst.xml | | us-ids.dtd | | us-ids.xsl |
| Documents being submitted | Files | | | | | | | | | | | | | | | |
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Comments

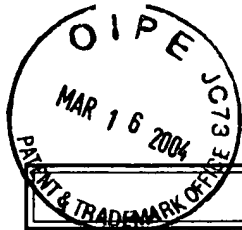
NO FEE REQUIRED - FILED IDS BEFORE FIRST OA

**FEE TRANSMITTAL**

Electronic Version v08

Stylesheet Version v08.0

| Title of Invention | APPARATUS FOR ELECTRO CHEMICAL DEPOSITION OF COPPER METALLIZATION WITH THE CAPABILITY OF IN-SITU THERMAL ANNEALING | | | | | | | | | | |
|--|---|-----------|-------------|-----------------|----------|-----------|-------------|---|------|-----|-----|
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| First Named Applicant: ROBIN CHEUNG | | | | | | | | | | | |
| Attorney Docket Number: AMAT3421C2 | | | | | | | | | | | |
| Art Unit: 1753 | | | | | | | | | | | |
| TOTAL FEE AUTHORIZED \$180 | | | | | | | | | | | |
| Patent fees are subject to annual revisions on or about October 1st of each year. | | | | | | | | | | | |
| BASIC FILING FEE | | | | | | | | | | | |
| <table border="1"><thead><tr><th>Fee Description</th><th>Fee Code</th><th>Amount \$</th><th>Fee Paid \$</th></tr></thead><tbody><tr><td>Submission Of Information Disclosure Stmt Fee</td><td>1806</td><td>180</td><td>180</td></tr></tbody></table> | | | | Fee Description | Fee Code | Amount \$ | Fee Paid \$ | Submission Of Information Disclosure Stmt Fee | 1806 | 180 | 180 |
| Fee Description | Fee Code | Amount \$ | Fee Paid \$ | | | | | | | | |
| Submission Of Information Disclosure Stmt Fee | 1806 | 180 | 180 | | | | | | | | |
| AUTHORIZED BILLING INFORMATION | | | | | | | | | | | |
| The commissioner is hereby authorized to charge indicated fees and credit any overpayments to: | | | | | | | | | | | |
| Deposit account number: 200782 | | | | | | | | | | | |
| Access Code ***** | | | | | | | | | | | |
| Deposit name: Moser Patterson Sheridan | | | | | | | | | | | |
| Deposit authorized name: N. ALEXANDER NOLTE | | | | | | | | | | | |
| Signature: \N. ALEXANDER NOLTE\ | | | | | | | | | | | |
| Date (YYYYMMDD): 2004-03-16 | | | | | | | | | | | |

**FEE TRANSMITTAL**

Electronic Version v08

Stylesheet Version v08.0

| Title of Invention | APPARATUS FOR ELECTRO CHEMICAL DEPOSITION OF COPPER METALLIZATION WITH THE CAPABILITY OF IN-SITU THERMAL ANNEALING | | | | | | | | | | |
|--|---|-----------|-------------|-----------------|----------|-----------|-------------|---|------|-----|-----|
| Application Number: 10/686486  | | | | | | | | | | | |
| Date: 2003-10-15 | | | | | | | | | | | |
| First Named Applicant: ROBIN CHEUNG | | | | | | | | | | | |
| Attorney Docket Number: AMAT3421C2 | | | | | | | | | | | |
| Art Unit: 1753 | | | | | | | | | | | |
| TOTAL FEE AUTHORIZED \$180 | | | | | | | | | | | |
| Patent fees are subject to annual revisions on or about October 1st of each year. | | | | | | | | | | | |
| BASIC FILING FEE | | | | | | | | | | | |
| <table border="1"><thead><tr><th>Fee Description</th><th>Fee Code</th><th>Amount \$</th><th>Fee Paid \$</th></tr></thead><tbody><tr><td>Submission Of Information Disclosure Stmt Fee</td><td>1806</td><td>180</td><td>180</td></tr></tbody></table> | | | | Fee Description | Fee Code | Amount \$ | Fee Paid \$ | Submission Of Information Disclosure Stmt Fee | 1806 | 180 | 180 |
| Fee Description | Fee Code | Amount \$ | Fee Paid \$ | | | | | | | | |
| Submission Of Information Disclosure Stmt Fee | 1806 | 180 | 180 | | | | | | | | |
| AUTHORIZED BILLING INFORMATION | | | | | | | | | | | |
| The commissioner is hereby authorized to charge indicated fees and credit any overpayments to: | | | | | | | | | | | |
| Deposit account number: 200782 | | | | | | | | | | | |
| Access Code ***** | | | | | | | | | | | |
| Deposit name: Moser Patterson Sheridan | | | | | | | | | | | |
| Deposit authorized name: N. ALEXANDER NOLTE | | | | | | | | | | | |
| Signature: N. ALEXANDER NOLTE | | | | | | | | | | | |
| Date (YYYYMMDD): 2004-03-16 | | | | | | | | | | | |



ELECTRONIC INFORMATION DISCLOSURE STATEMENT

Electronic Version v18

Stylesheet Version v18.0

Title of
Invention

APPARATUS FOR ELECTRO CHEMICAL DEPOSITION OF
COPPER METALLIZATION WITH THE CAPABILITY OF IN-
SITU THERMAL ANNEALING

Application Number: 10/686486



Confirmation Number: 8014

First Named Applicant: ROBIN CHEUNG

Attorney Docket Number: AMAT3421C2

Art Unit: 1753

Search string: (3649509 or 3727620 or 3770598 or 4027686
or 4092176 or 4110176 or 4113492 or 4315059
or 4326940 or 4336114 or 4376685 or 4405416
or 4428815 or 4435266 or 4489740 or 4510176
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or 5100516 or 5155336 or 5162260 or 5222310
or 5224504 or 5230743 or 20010030101 or
20020000271 or 20020022363 or 20020029961
or 20020037641 or 20020074233),pn.

US Patent Documents

Note: Applicant is not required to submit a paper copy of cited US Patent Documents

| init | Cite.No. | Patent No. | Date | Patentee | Kind | Class | Subclass |
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| | 2 | 3727620 | 1973-04-17 | ORR | | | |
| | 3 | 3770598 | 1973-11-06 | CREUTZ | | | |
| | 4 | 4027686 | 1977-06-07 | SHORTES, ET AL. | | | |
| | 5 | 4092176 | 1978-05-30 | KOZAI, ET AL. | | | |
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| | 8 | 4315059 | 1982-02-09 | RAISTRICK, ET AL. | | | |
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| | 10 | 4336114 | 1982-06-22 | MAYER, ET AL. | | | |



| | | | |
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| 13 | 4428815 | 1984-01-31 | POWELL, ET AL. |
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| 15 | 4489740 | 1984-12-25 | RATTAN, ET AL. |
| 16 | 4510176 | 1985-04-09 | CUTHBERT, ET AL. |
| 17 | 4518678 | 1985-05-21 | ALLEN |
| 18 | 4519846 | 1985-05-28 | AIGO |
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| 26 | 5055425 | 1991-10-08 | LEIBOVITZ, ET AL. |
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| 32 | 5222310 | 1993-06-29 | THOMPSON, ET AL. |
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| 34 | 5230743 | 1993-07-27 | THOMPSON, ET AL. |

US Published Applications

Note: Applicant is not required to submit a paper copy of cited US Published Applications

| init | Cite.No. | Pub. No. | Date | Applicant | Kind | Class | Subclass |
|------|----------|-------------|------------|------------------|------|-------|----------|
| | 1 | 20010030101 | 2001-10-18 | BERNER, ET AL. | | | |
| | 2 | 20020000271 | 2002-01-03 | RITZDORF, ET AL. | | | |
| | 3 | 20020022363 | 2002-02-21 | RITZDORF, ET AL. | | | |
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| | 5 | 20020037641 | 2002-03-28 | RITZDORF, ET AL. | | | |
| | 6 | 20020074233 | 2002-06-20 | RITZDORF, ET AL. | | | |



Signature

| | |
|---------------|------|
| Examiner Name | Date |
| | |